

What is Claimed is:

1. A programmable logic resource
comprising:

an input/output (I/O) buffer that
receives data from circuitry external to the
5 programmable logic resource and generates a plurality
of outputs;

a crossbar switch that receives the
plurality of outputs from the I/O buffer and generates
a plurality of outputs, wherein the crossbar switch is
10 configured to send at least one of the plurality of
outputs from the I/O buffer to a corresponding one of
the plurality of outputs of the crossbar switch;

an intellectual property block that
receives the plurality of outputs of the crossbar
15 switch for processing.

2. The programmable logic resource of
claim 1 wherein the I/O buffer:

receives the data at I/O ports located
along the periphery of the programmable logic resource;
5 and

decodes the data to generate the
plurality of outputs.

3. The programmable logic resource of
claim 1 comprising a package in which the programmable
logic resource is mounted.

4. The programmable logic resource of
claim 3 wherein the package has pins through which the
circuitry external to the programmable logic resource
sends data, wherein the data is further routed from
5 the pins to the I/O buffer.

5. A digital processing system comprising:
processing circuitry;
a memory coupled to the processing
circuitry; and
5 a programmable logic resource as defined
in claim 1 coupled to the processing circuitry and the
memory.

6. A printed circuit board on which is
mounted a programmable logic resource as defined in
claim 5.

7. The printed circuit board defined in
claim 6 further comprising:
a memory mounted on the printed circuit
board and coupled to the programmable logic resource.

8. The printed circuit board defined in
claim 6 further comprising:
processing circuitry mounted on the
printed circuit board and coupled to the programmable
5 logic resource.

9. A printed circuit board comprising:
processing circuitry mounted on the
printed circuit board;
a memory mounted on the printed circuit
5 board and coupled to the processing circuitry; and
a package having a plurality of pins
mounted on the printed circuit board at fixed pin
locations and coupled to the processing circuitry and
the memory at the fixed pin locations, the package
10 having embedded therein a programmable logic resource
having a plurality of input/output (I/O) ports located

along the periphery of the programmable logic resource and coupled to the plurality of pins, wherein the programmable logic resource comprises circuitry
15 configured to send data from at least one of the plurality of I/O ports to a corresponding one of a plurality of data ports in an intellectual property block for processing.

10. The printed circuit board of claim 9 wherein at least one of the plurality of pins is coupled to a nearest available one of the plurality of I/O ports.

11. The printed circuit board of claim 9 wherein the programmable logic resource further comprises an I/O buffer that receives the data from the plurality of I/O ports and decodes the data for output
5 to the circuitry.

12. The printed circuit board of claim 9 wherein the circuitry is a configurable crossbar switch.

13. The printed circuit board of claim 9 wherein the circuitry is a dynamically adjustable crossbar switch.

14. A method of improving connectivity between signaling input/output (I/O) and an intellectual property block in a programmable logic resource comprising:

5 driving a signal to a fixed pin location on a circuit board upon which a package, having embedded therein the programmable logic resource, is mounted;

routing the signal from the fixed pin
10 location to a nearest available I/O port located along
the periphery of the programmable logic resource; and
configuring a crossbar switch to route
the signal from the nearest available I/O port to a
corresponding data port in the intellectual property
15 block for processing.

15. The method of claim 14 wherein driving
the signal comprises sending the signal as output from
one of processing circuitry and a memory.

16. The method of claim 14 wherein the
signal is a low voltage differential signal.

17. The method of claim 14 further
comprising decoding the signal received from the
nearest available I/O port for output to the crossbar
switch.

18. The method of claim 14 further
comprising configuring the crossbar switch during
initial configuration of the programmable logic
resource.

19. The method of claim 14 further
comprising configuring the crossbar switch during
reconfiguration of all or part of the programmable
logic resource.

20. The method of claim 14 further
comprising dynamically adjusting the crossbar switch
while data is processing in the programmable logic
resource.